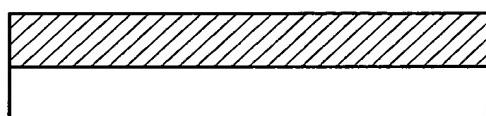
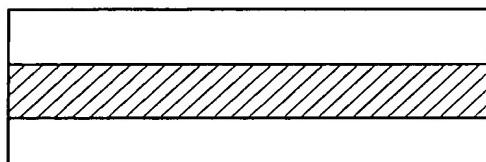


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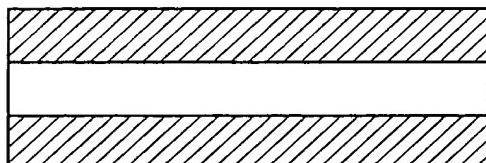
MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER

FIG. 1a



PIEZOELECTRIC LAYER
MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER

FIG. 1b

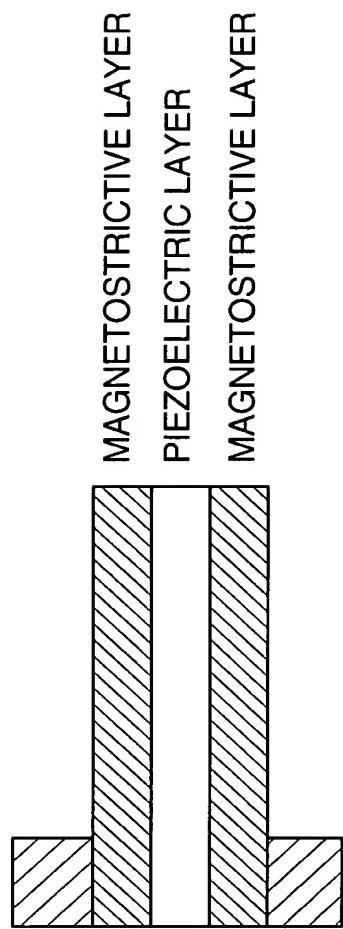


MAGNETOSTRICTIVE LAYER
PIEZOELECTRIC LAYER
MAGNETOSTRICTIVE LAYER

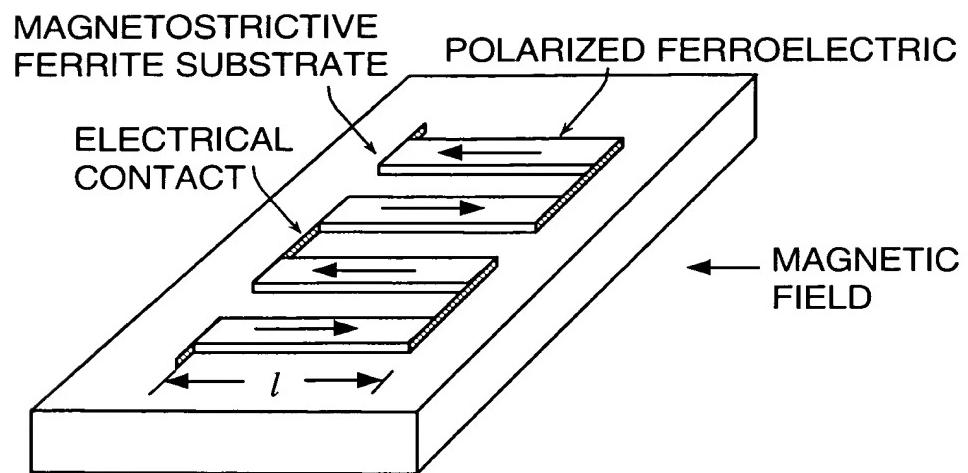
FIG. 1c

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FIG. 2

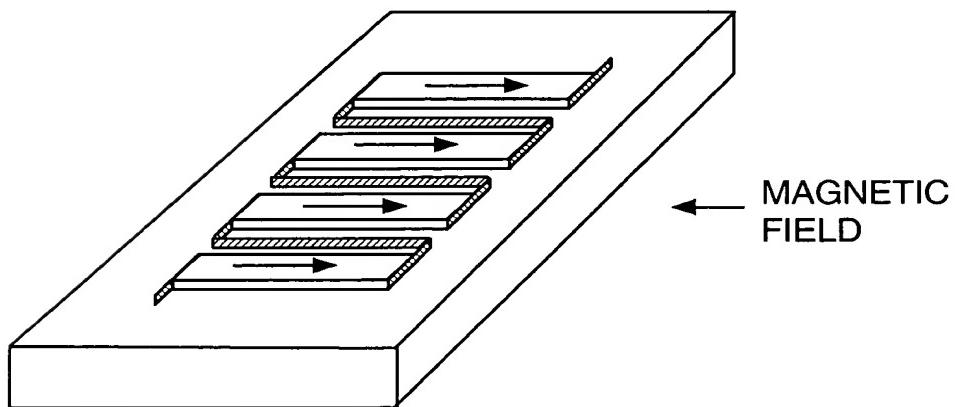


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ANTIPARALLEL POLARIZATION

FIG. 3a



PARALLEL POLARIZATION

FIG. 3b

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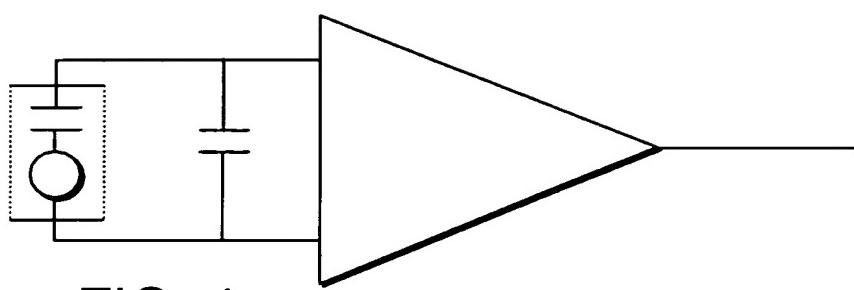


FIG. 4a

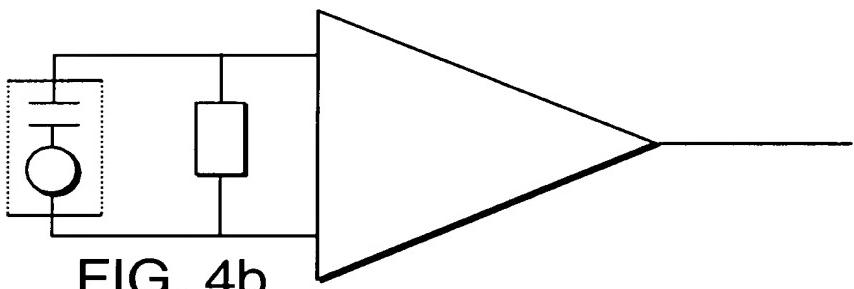


FIG. 4b

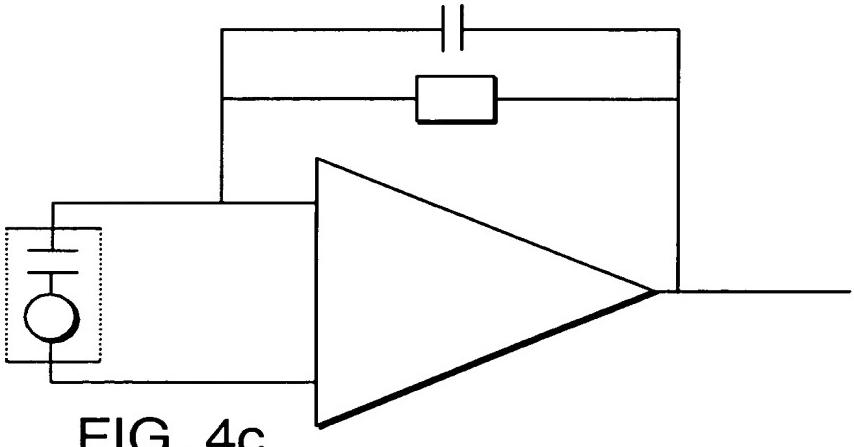
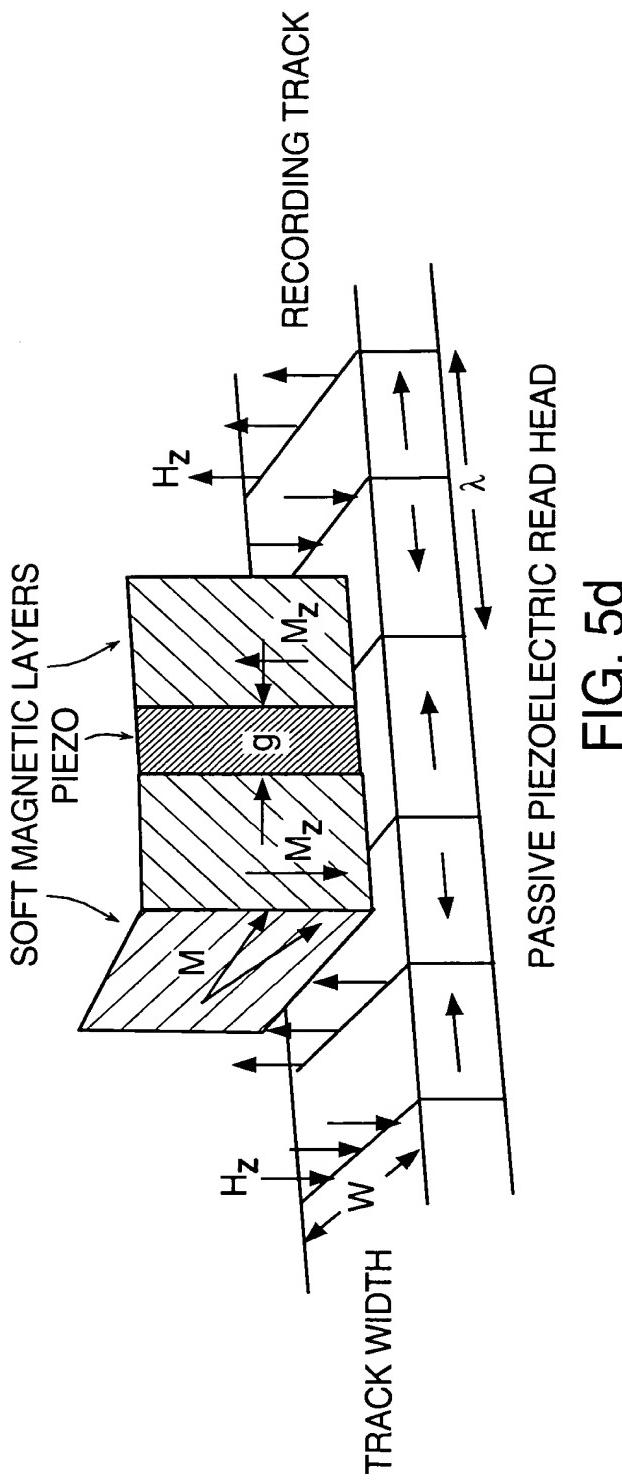
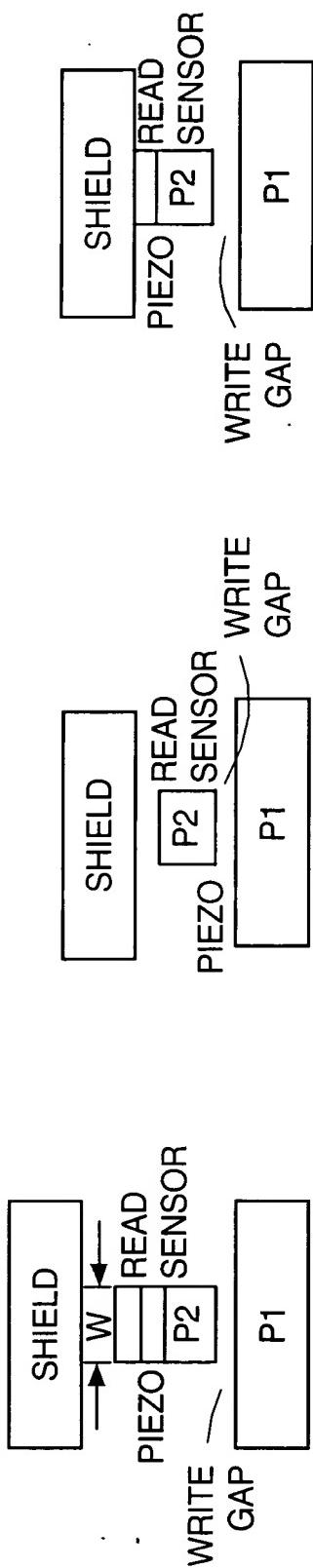


FIG. 4c

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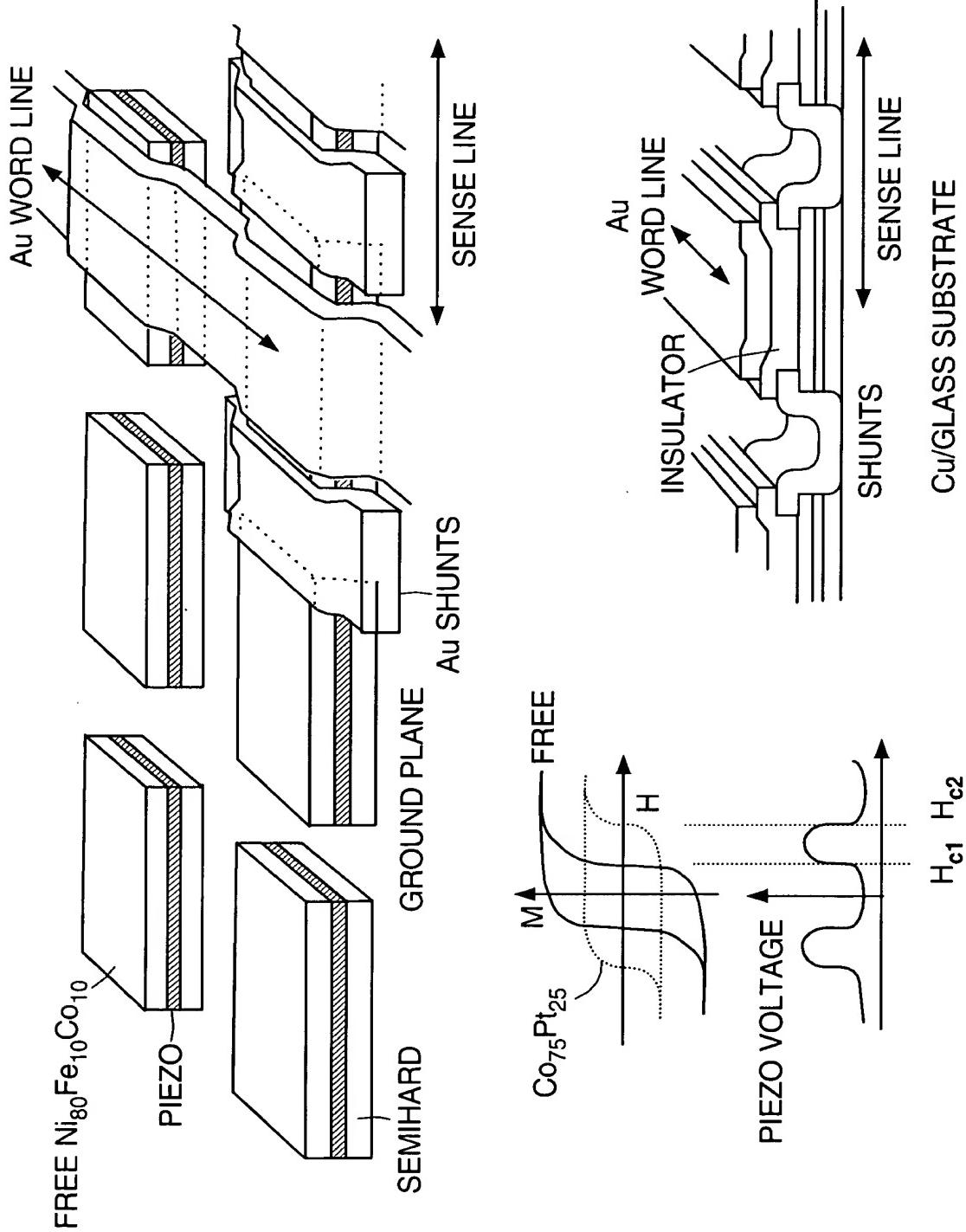


FIG. 6

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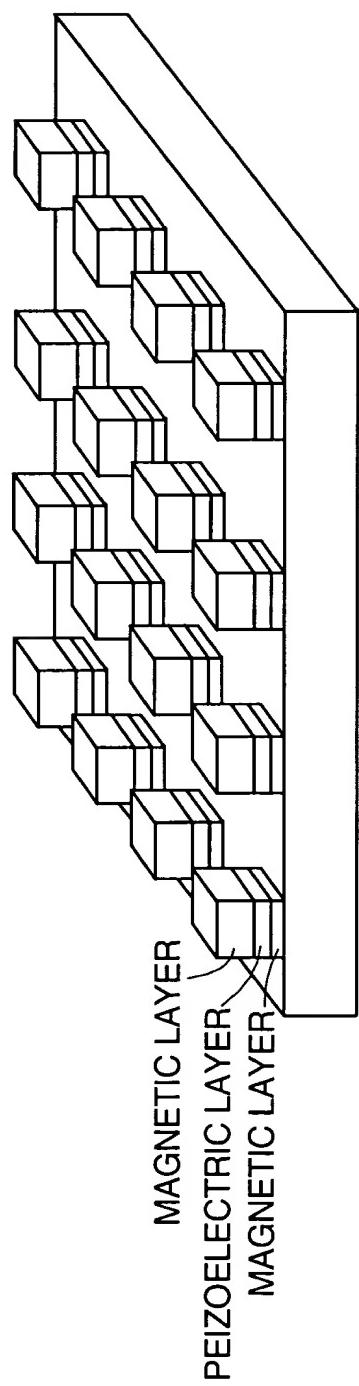


FIG. 7

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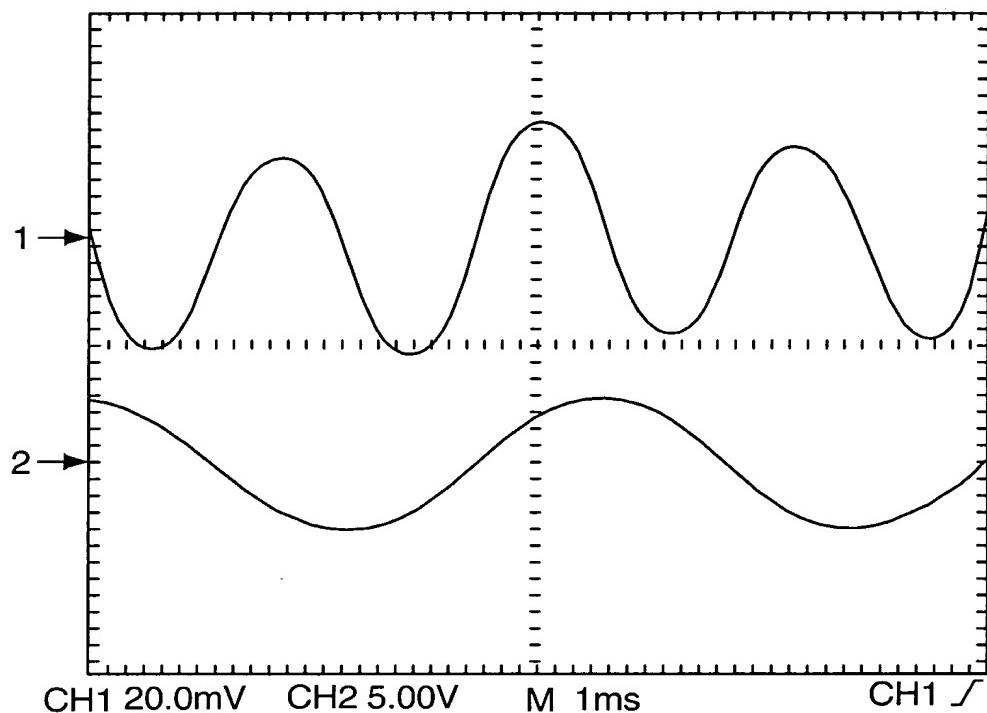


FIG. 8

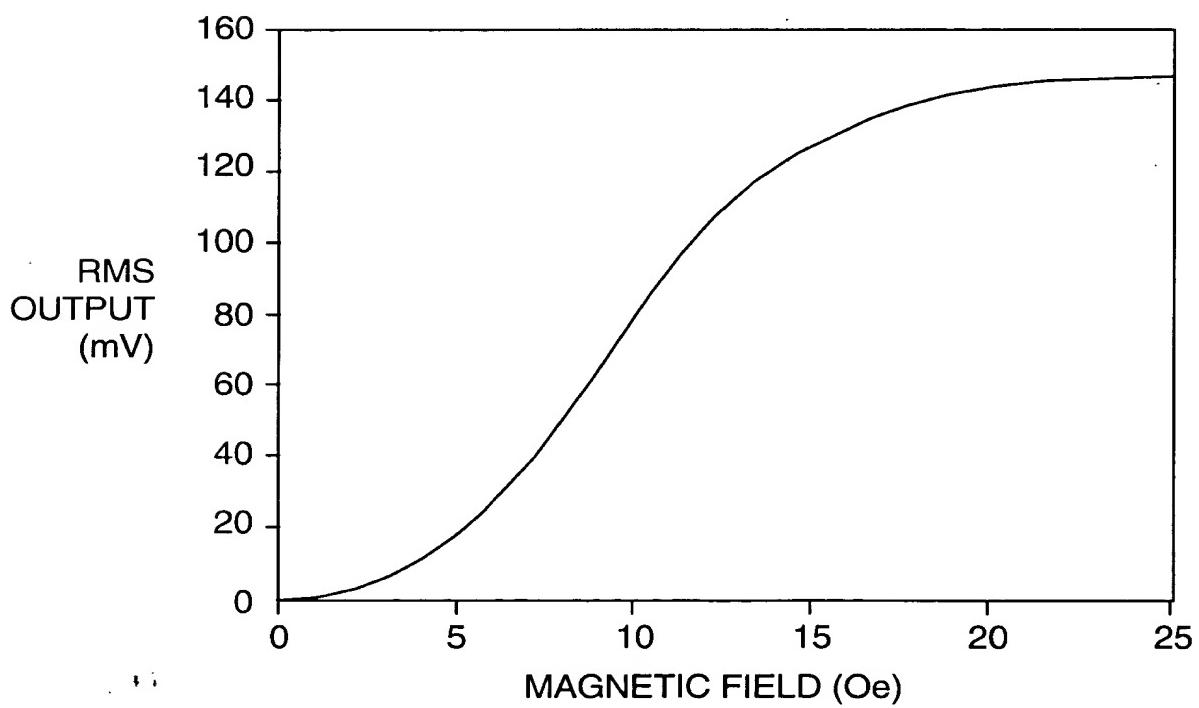


FIG. 9

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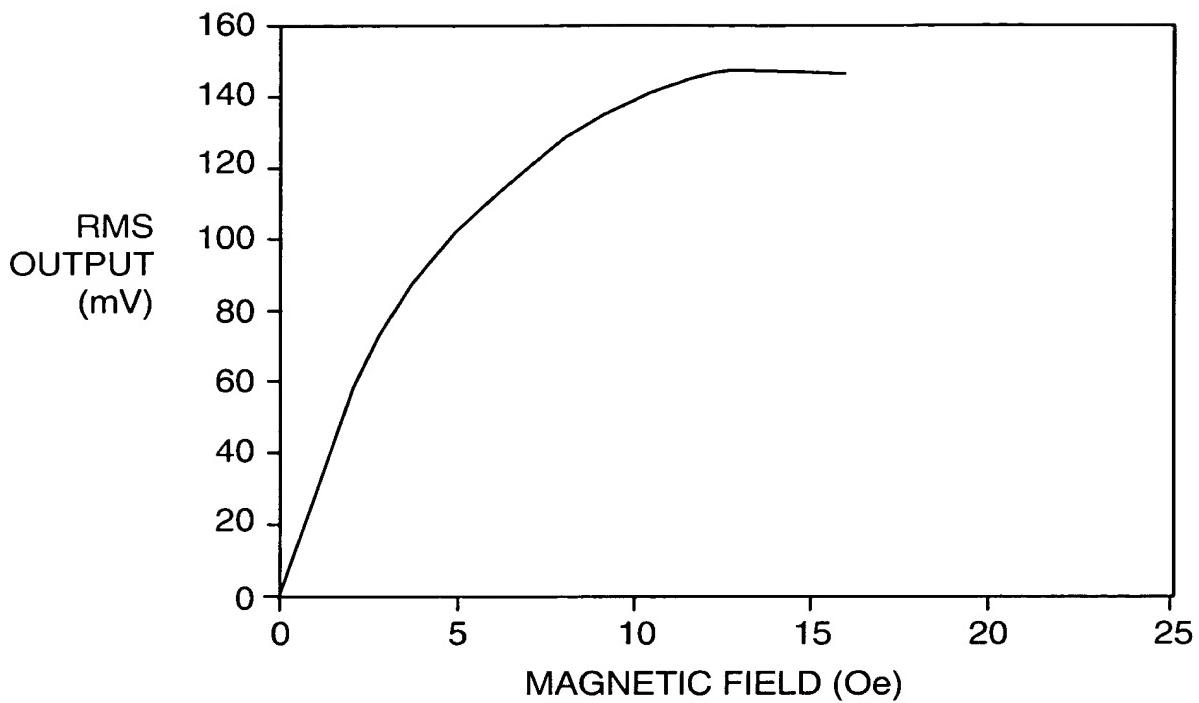


FIG. 10

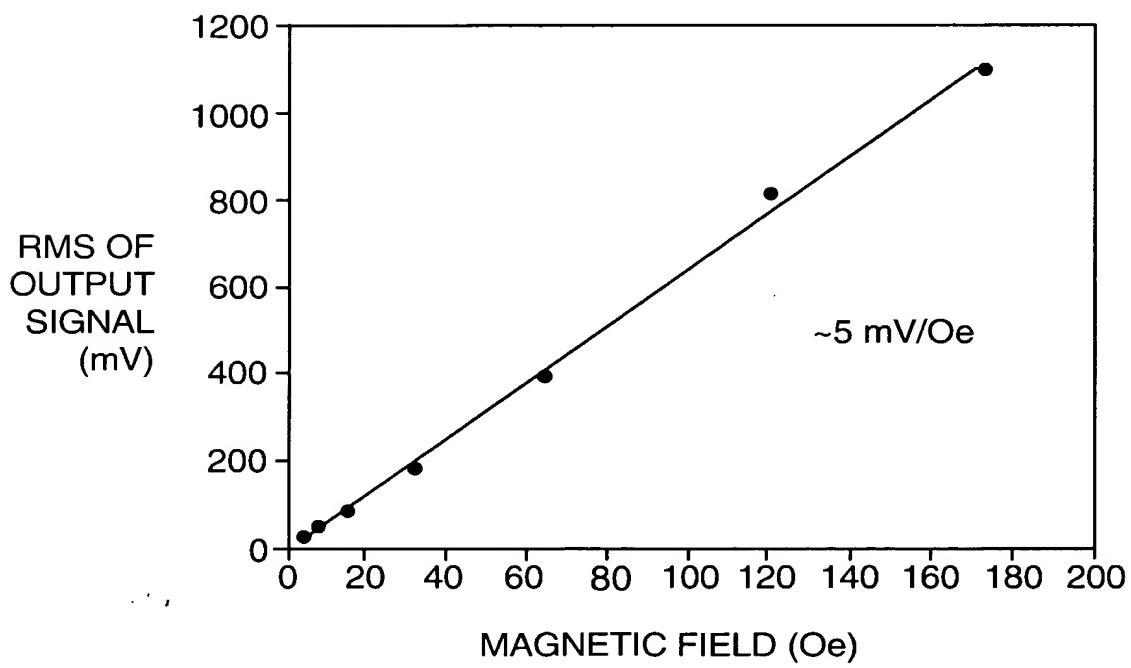


FIG. 11

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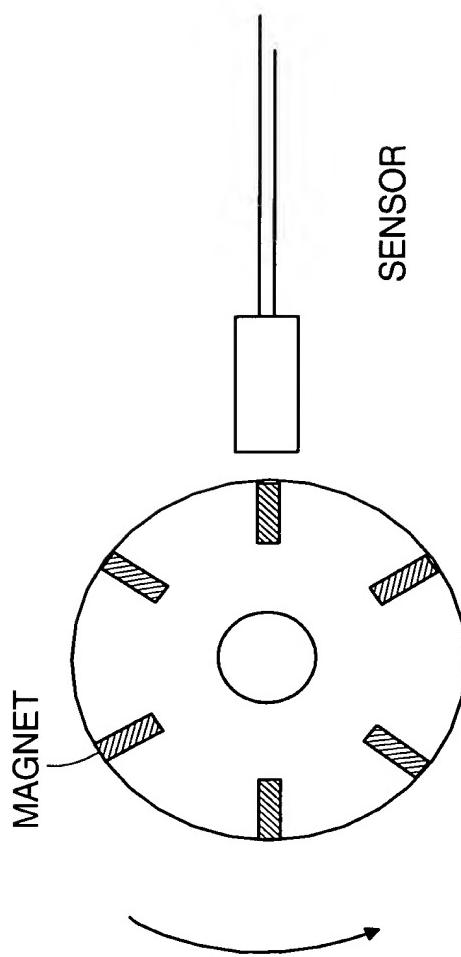
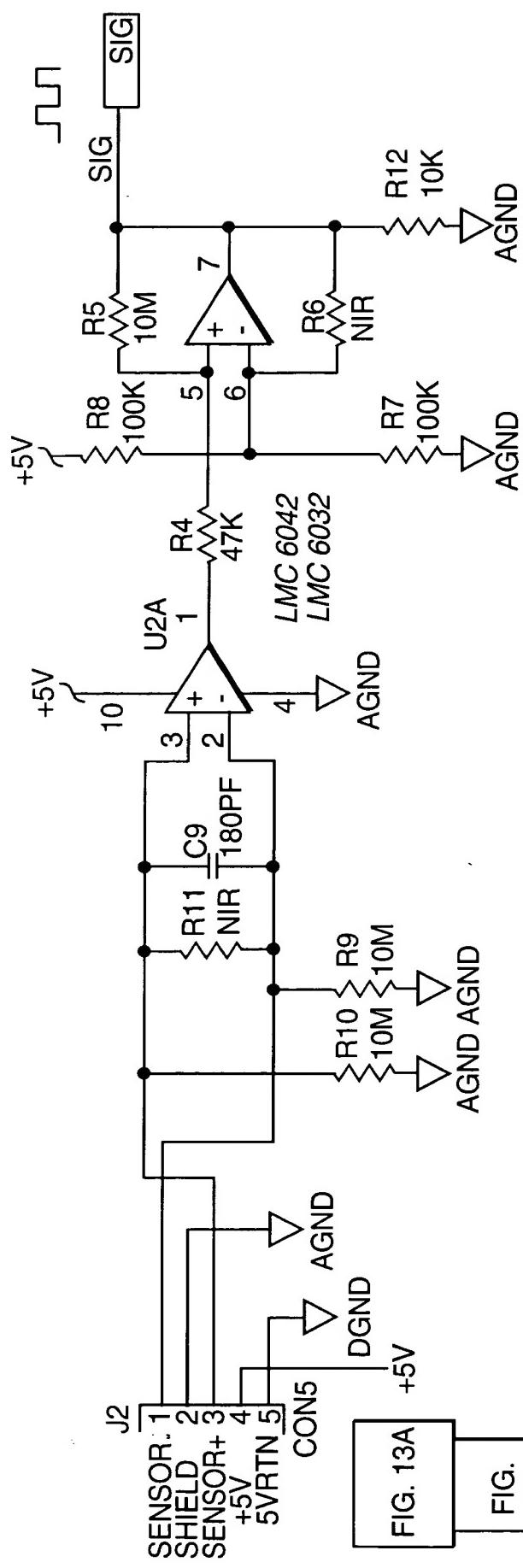


FIG. 12



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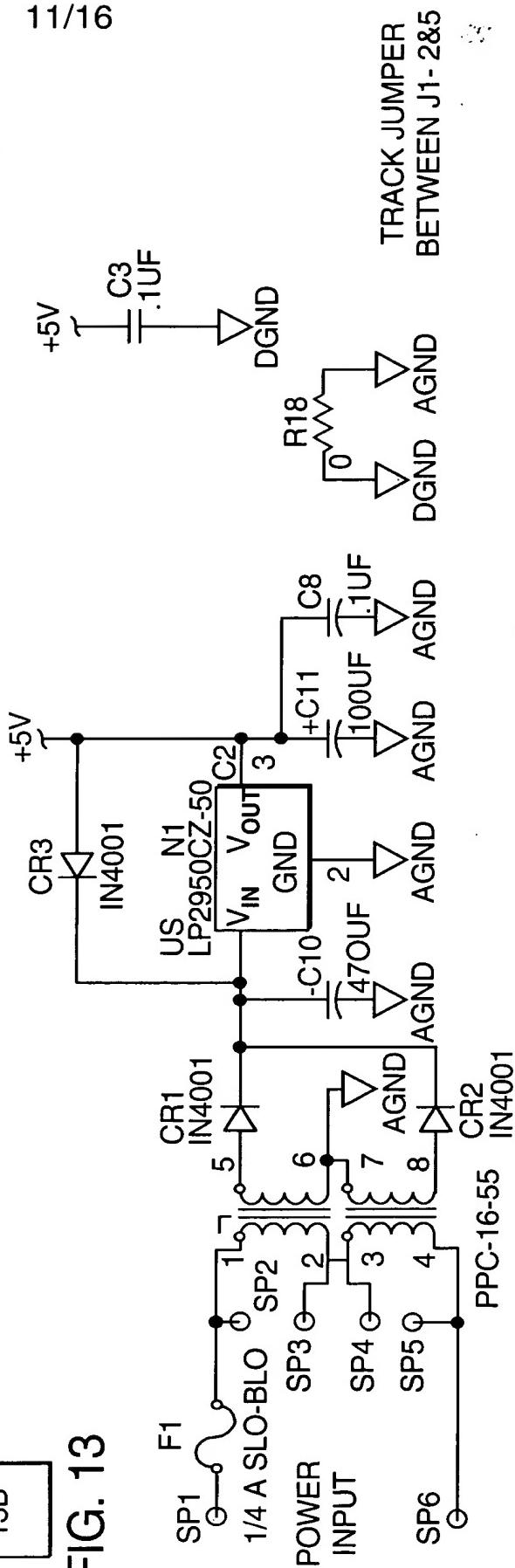
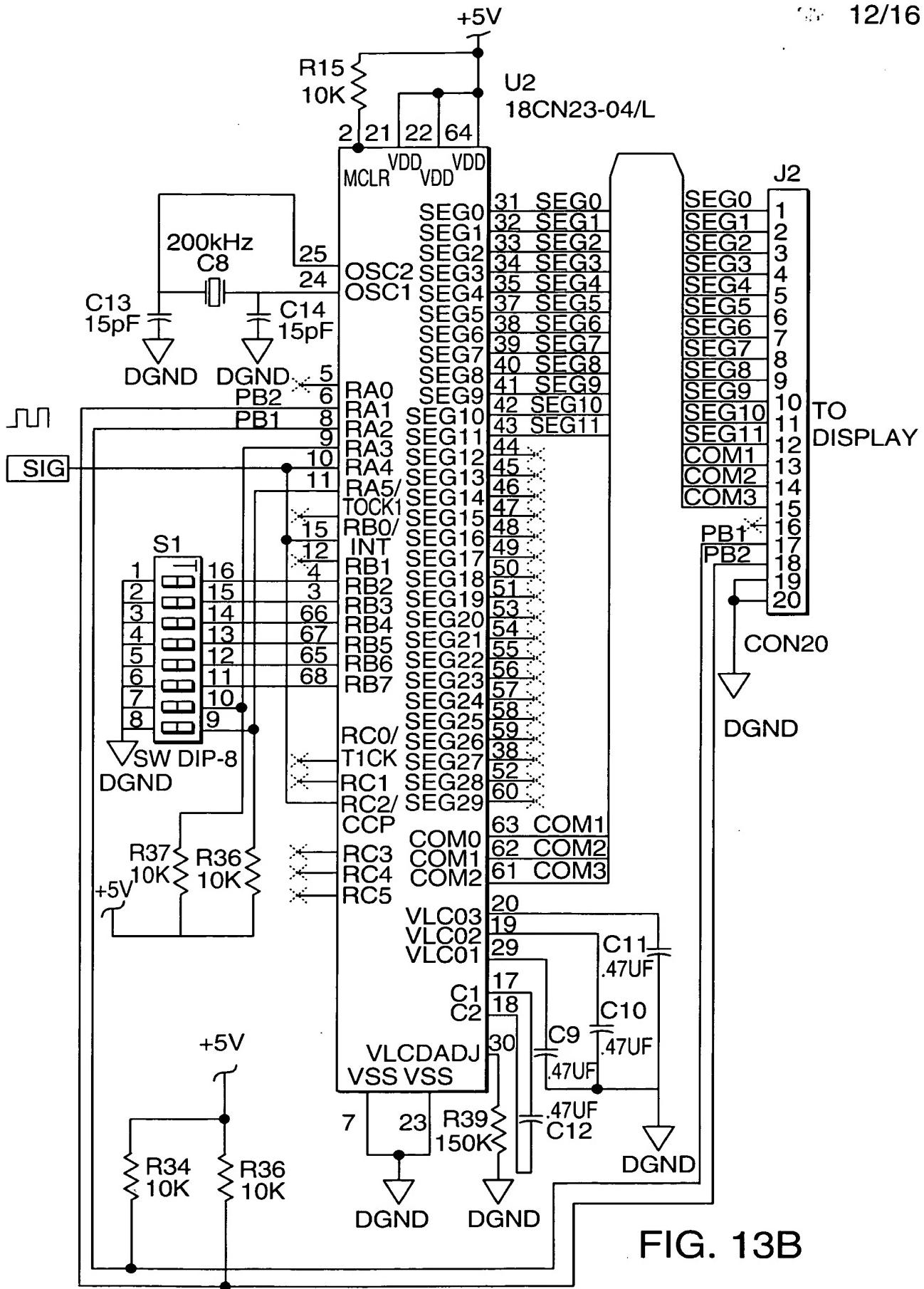


FIG. 13A



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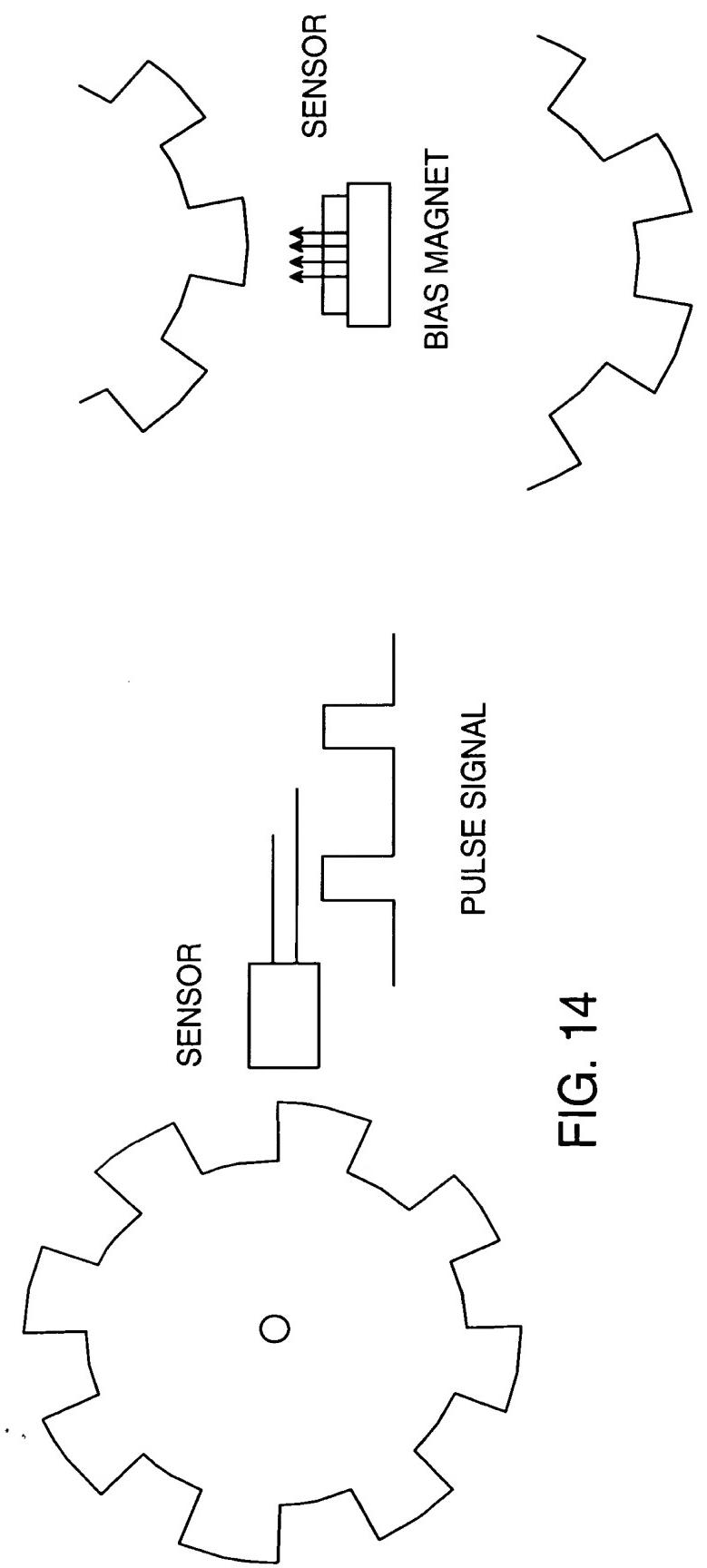


FIG. 14

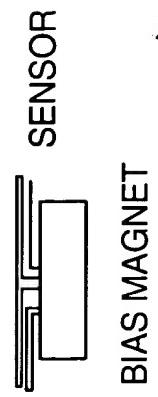


FIG. 15

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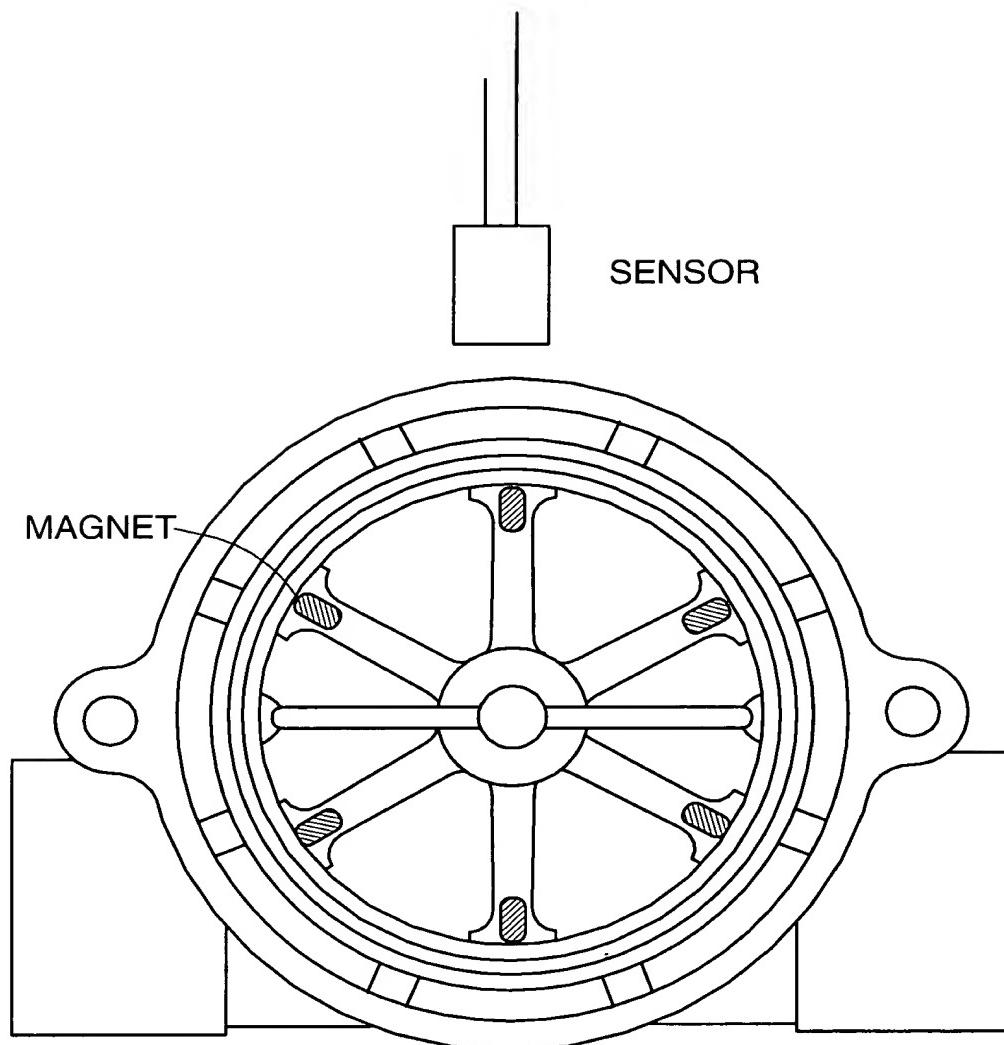


FIG. 16

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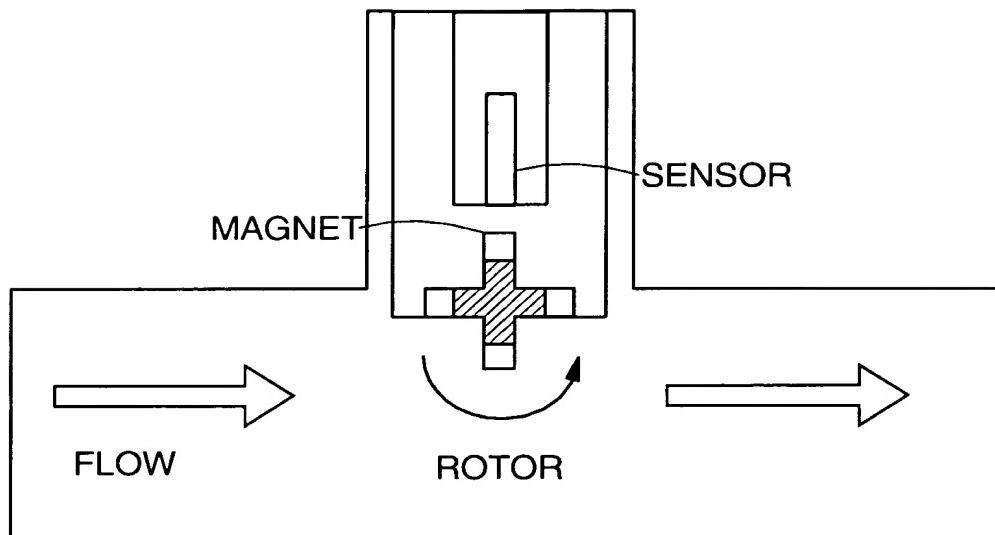


FIG. 17

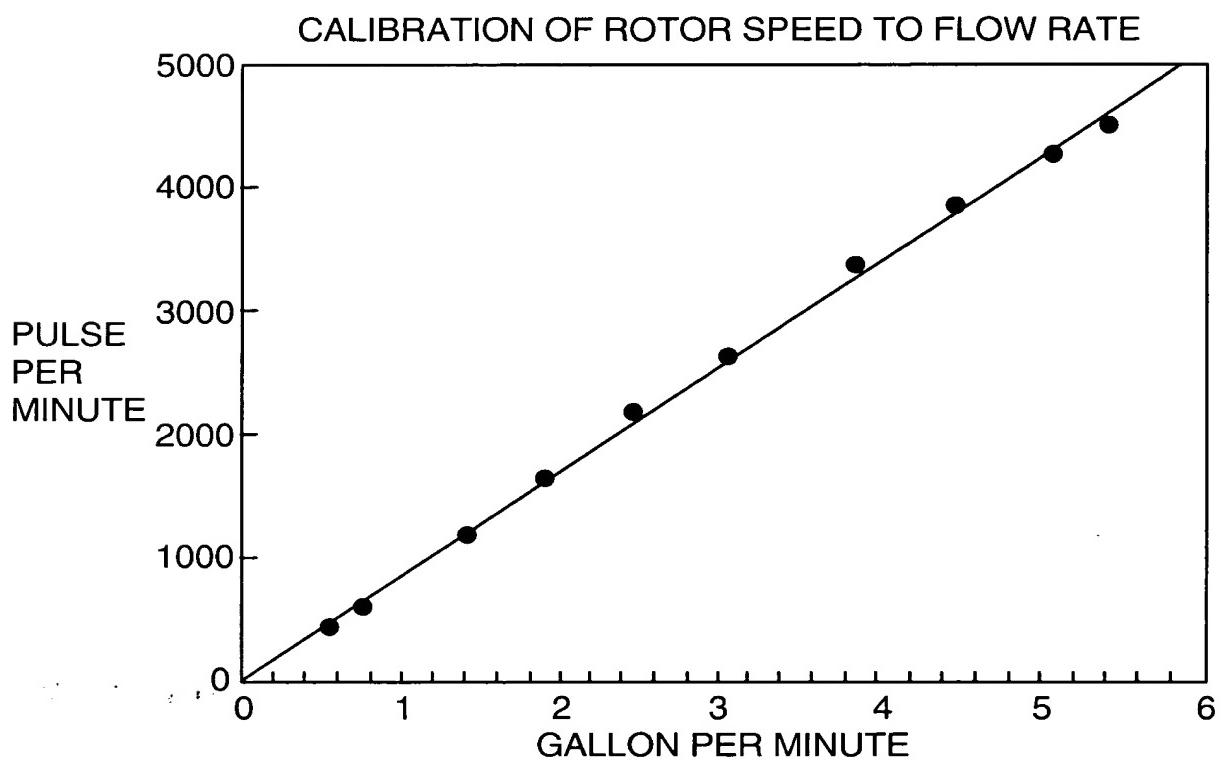


FIG. 18

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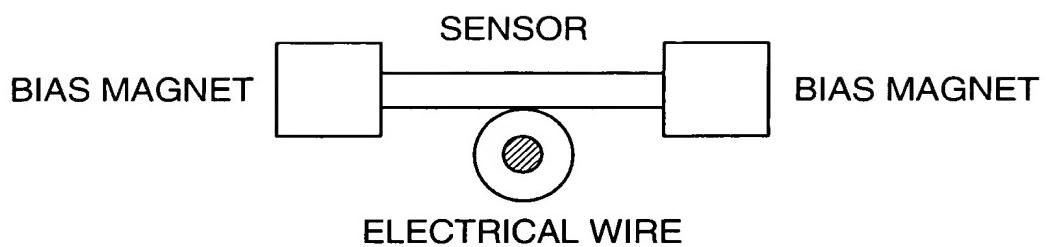


FIG. 19

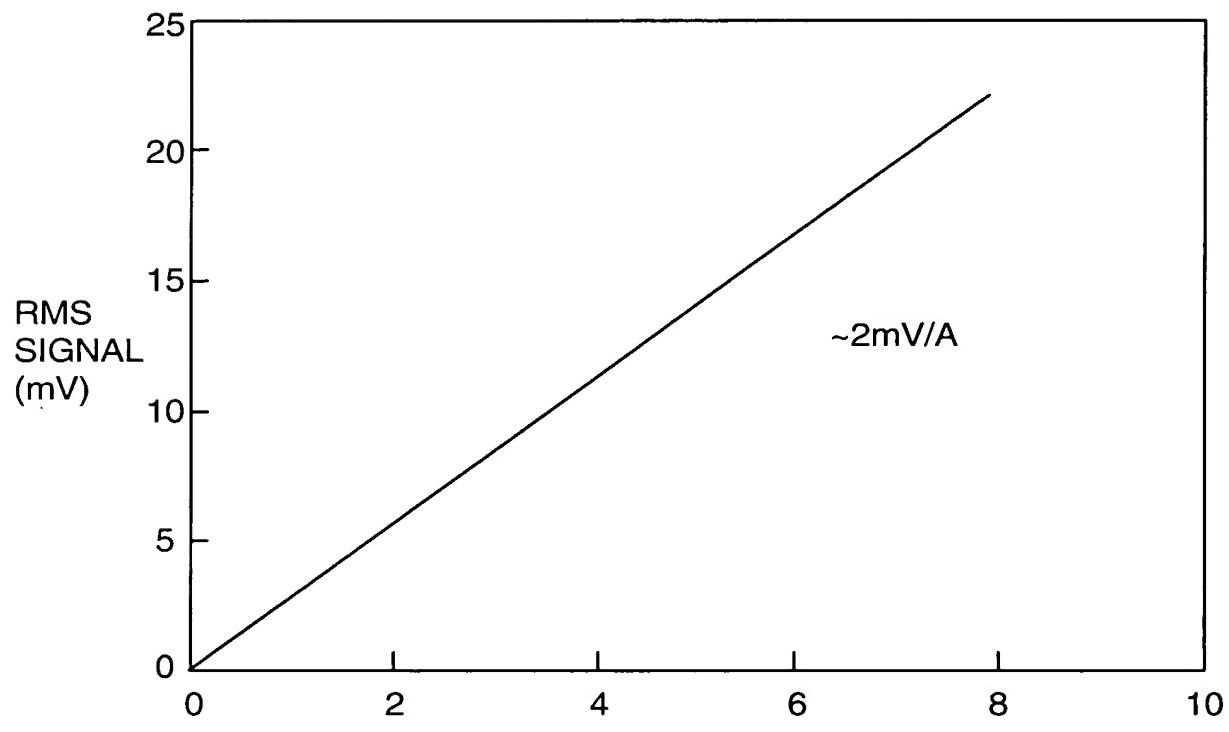


FIG. 20